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## Cultural Considerations in Type 2 Diabetes and Cardiovascular Disease

- Traci Thompson: 00:10 Thank you for joining this podcast on cultural considerations in type 2 diabetes and cardiovascular disease. This podcast is a continuation of our series to reduce cardiovascular deaths, heart attacks, strokes and heart failure, in people living with type 2 diabetes. It's based on the collaborative initiative between the American Heart Association and the American Diabetes Association, Know Diabetes by Heart. This series is brought to you by founding sponsor, Novo Nordisk, and national sponsor, Bayer. I'm Dr. Traci Thompson, a board-certified internist and CEO and founder of Dr. Traci's House, a nonprofit organization that aims to improve health equity by empowering communities that currently correlate with worse health outcomes. And joining me are Dr. Latha Palaniappan, an internist and clinical population researcher. Her research has focused on the study of diverse populations, chronic disease and prevention. And Dr. Alka Kanaya, a professor of medicine at University of California at San Francisco. Her clinical research is focused on the field of type two diabetes and obesity. Let's get started. So, Dr. Latha, what has your research regarding diabetes and cardiovascular disease shown?
- Latha Palaniappan: 01:34 Thank you Dr. Thompson and thank you for having us on this podcast. A large majority of my research over the last 25 years has focused on race ethnic differences in diabetes and cardiovascular disease. We recently wrote a statement on the epidemiology, Dr. Kanaya and I, the epidemiology of diabetes and atherosclerotic cardiovascular disease among Asian American adults, so I'll focus a little bit on that group. So, my research over the years has shown that Asian Americans and often Pacific Islanders and native Hawaiians also are aggregated together in one big lump. And, when we disaggregate these groups, we find that there's wide variation in rates of diabetes, for instance.

02:21 So all groups, when we look at them together, the prevalence of diabetes in the United States is about 13% now and this risk varies greatly ranging from 35% native Hawaiian Pacific Islanders among Asian groups, the lowest group is Chinese, 16%, and the highest Asian groups are South Asians at 30% and Filipinos at 31%. So, a big takeaway from my research has been that you really have to disaggregate race ethnic groups to fully appreciate the nuances and to be able to focus our efforts on the highest risk groups.

Traci Thompson: 03:03 Thank you so much for that. And when we're talking about the subgroups, Dr. Kanaya, how varied is the prevalence among particular subgroups in what you've seen in your research?

Alka Kanaya: 03:14 Yeah, thank you for having us on this podcast. So, it depends on the data sets you use. We have looked at national data using the National Health and Nutrition Examination Survey, which is a survey that is done every two years. In 2011, this survey started to over sample Asian-American groups. And we've put together three waves of this national survey. Unfortunately, they didn't have big enough numbers to really disaggregate the data down to national subgroups like Chinese-Americans, Asian-Indians. They didn't have enough numbers in each of the different groups to have completely disaggregated data. But we were able to geographically disaggregate into three major Asian-American groups and that is into East Asians, South Asians and Southeast Asians. The NHANES (National Health and Nutrition Examination Survey) has been sampling non-Hispanic whites and Blacks and Hispanic-Americans since the 1980s. So, we were able to compare these three geographically defined Asian groups with the three other large US race ethnic groups and found just a really wide variation in the prevalence of diabetes.

04:31 The prevalence was highest among South Asians at around 25% and for Southeast Asians at 24% and for Chinese-Americans and other East Asians, it was closer to 14%. That's compared to a prevalence of 12% diabetes in whites and about 23% in Hispanics and 21% in African-Americans or Black Americans. So, it depends on the data sets you use, but these national data just show that there is this immense variation among Asian-American groups and it mimics the overall variations that we see between whites and Blacks and Latinos in the country. The problem is when we aggregate all of the Asians together and just look at that one big bucket that includes 23 different origin countries where Asians have immigrated from, we lose that variation and we get one number, which is often much lower than the differences that I've explained that you see in the

South Asians and the Southeast Asians. So, the aggregated Asian prevalence was closer to 13 or 14%, much, much lower than when you disaggregate them.

Traci Thompson: 05:49 Thank you so much, Dr. Kanaya for that. And talking about data sets and how well our current data sets reflect some of the subgroups. Dr. Latha, what would you sort of recommend or what's your experience with the health records and how that has impacted your research?

Latha Palaniappan: 06:07 Thank you so much for that question, Dr. Thompson. We've come a long way and we still have a long way to go with collecting race ethnicity in our national health records. Dr. Kanaya mentioned one of the sort of leading issues is that the sample size can be too small in these groups to make meaningful conclusions, so we have to aggregate these Asian groups. Even when the data are collected, often they're omitted. And then at times, we study one race ethnic group, for instance, Japanese, and we extrapolate that to another Asian subgroup like South Asian, so we have these problems with omission aggregation and extrapolation with these health data. We recently published a comment in the American Journal of Public Health because the National Health Interview Survey and the National Health and Nutrition Examination Survey have been not reporting Asian subgroups, even though this data is collected because the sample sizes are too small and this compounds itself because then we're not actually utilizing the data that are collected to provide precision health for Asians.

07:15 So we really need to improve that in our national dataset collection. And then also, with regard to electronic health records, we are just now with the meaningful use criteria in the use of electronic health records in our clinical systems have been asked to collect race ethnic data, to be able to analyze it and to create programs to close disparities that we have identified. This was really a roadmap that was created over a decade ago. We're still in various phases of operationalizing this in our clinical systems. Then the other point I'll mention is that we really need to think about where the puck is going. Where I live and work, California, one in seven babies that are born are multiracial, have more than one race. As we continue to collect and analyze this healthcare data, we need to consider multiracial population, how we collect data on multiracial populations.

08:18 Do we know the father's race ethnicity and the mother's race ethnicity? That can be quite complex as we think about multiracial individuals. I think this is an important area because

in the health data that I have looked at, at Kaiser and Sutter and in my experience, multiracial individuals, we are finding, have higher risk of cardiovascular disease outcomes. In other collaborations that I have, we've shown that birth outcomes are worse actually in multiracial individuals. I don't fully have explanations for this yet, but we are seeing these signals, so important to collect and analyze multiracial individual information as well.

Traci Thompson: 8:59

Thank you so much for that insight. And Dr. Kanaya, what cultural differences do you see that should be addressed to improve treatment and reduce cardiovascular risk?

Alka Kanaya: 9:10

Yes, that's a really important question and I think it comes down to recognizing that there's so much difference, in terms of the different Asian-American groups. There's so much divergence in cultural heritage, in socioeconomic factors, lifestyle behaviors, as well as other stressors and immigration factors that each of these groups has experienced. Our work, I've been leading the MASALA Study, which stands for Mediators of Atherosclerosis in South Asians Living in America, since 2010. This study has really shed a lot of light on South Asians and cultural factors, lifestyle factors, diet and exercise and other psychological factors and other multi-level factors including neighborhood environment and discrimination and other interpersonal behaviors and beliefs that impact both diabetes and cardiovascular risk factors. I think that these type of data that you can't really get from health systems because it's really granular, it takes a lot of time and energy to collect and needs to be collected in a systematic way, adds a lot more nuance into what we can get from larger administrative data sets.

10:30

These type of data can be used to really help culturally tailor interventions to get to the bottom of differences in disparities, in disease risk. For example, we found that South Asians in our cohort, about 40% are lifelong vegetarians. But if you're a health provider and you are talking to someone about their diet, you may ask what type of diet do you eat? Are you on any special diets where you omit or don't take certain types of foods? If someone tells you that, "Yeah, I'm vegetarian. I've been a lifelong vegetarian," for most healthcare providers, that gives them kind of a pass like, "Oh, great, you're eating a plant-based diet. Wonderful, move on," Because we know that there are so many health risks with eating red and processed meats. However, our study has found that just because someone's a vegetarian does not necessarily mean that it's a healthy vegetarian diet.

11:24 When we analyze our data looking at diet, we found three different types of major dietary patterns that South Asians, who are mostly immigrants to the United States, are eating. One is a healthy prudent diet with lots of whole grains, legumes, fruits, vegetables, and low-fat dairy. The other pattern that was equally prominent was a more traditional South Asian diet, which included a lot of high-fat dairy as well as fried foods and not necessarily healthy plant-based products. The third diet was more of animal protein and a Western diet. When we looked at risk factors that track with these different diets, we found that those eating that traditional South Asian diet, which included the fried foods and the high-fat dairy, those people consuming that type of diet had higher problems with insulin resistance, lower HDL cholesterol, and more risk of developing diabetes.

12:26 So culturally, tailoring someone's diet is important because those people who may be lifelong vegetarians are going to want to continue to eat foods that matter to them and their family and their culture. So how do you actually tailor the foods they enjoy and recognize as part of their background to be healthier? You need to get more into detail about the types of foods and what could be modifiable to really help with interventions. So that's just one example of knowing that there are cultural differences. As a provider, you need to dig a little deeper when you ask questions about diet or when you ask questions about physical activity or other stressors that people may be experiencing related to family or acculturation or other immigrant related stressors.

Latha Palaniappan: 13:16 Thanks, Dr. Kanaya. I would love to build on the wonderful points that you brought up. So, mentioning sort of three concepts that I think you brought up. One is what I call festival food syndrome. So, the traditional South Asian diet that you mentioned, and I notice this in my patients as well, they're eating sort of the foods of their festivals, samosa, jalebi, Gulab Jamun, on a regular basis on the weekends. The way that I convey this to my patients is I say, "It would be like if you move to the moon, and you ate Thanksgiving every weekend." Often, immigrants do eat these festival foods to bring back sort of the warm memories of home. So, understanding that the foods that are being overeaten in this traditional South Asian diet aren't really traditional in the sense that they were everyday foods, but they were more festival foods.

14:07 As you mentioned, our nutritionists are getting better, but we still have a long way to go. We would send our Asian patients to the nutritionist and the nutritionist would say, "Well, don't eat mayonnaise, don't eat burgers, don't eat pasta." Our Asian

patients would go away, and they would continue to eat moon cakes and fried spring rolls. We wrote a paper on this called All of the Things We Don't Eat, sort of cultural considerations for dietary counseling and really thinking about counseling our patients to going back to sort of the ancient foods of their own culture, which contain more whole grains and whole proteins for the vegetarian diet, as well. So, thanks for bringing up those great points.

Traci Thompson: 14:49

Well, I can tell you both that I have learned so much, especially when it comes to festival food syndrome and the need for our providers to ask more questions and to be more pointed, especially when we're talking about the types of foods and also delving a little deeper into the multiracial population. So this concludes the podcast, and we want to hear from you. If you have a suggestion for future content, email [KnowDiabetesByHeart@diabetes.org](mailto:KnowDiabetesByHeart@diabetes.org). It's our mission to reach as many listeners as possible with this lifesaving information. If you have enjoyed this podcast and are listening on iTunes or Google Play, don't forget to leave us a rating and subscribe. Thank you very much for listening and stay tuned for upcoming podcasts.